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## THE NEGRITO AND ALLIED TYPES IN THE PHILIPPINES

By DAVID P. BARROWS

NINE years of residence and travel in the Philippines have produced the conviction that in discussions of the ethnology of Malaysia, and particularly of the Philippines, the Negrito element has been slighted. Much has been made of the "Indonesian" theory and far too much of pre-Spanish Chinese influence, but the result to the physical types found in the Philippines of the constant absorption of the Negrito race into the Malayan and the wide prevalence of Negrito blood in all classes of islanders has been generally overlooked.

The object of this paper is to present some physical measurements of the Negrito and then of several other pagan peoples of the islands whose types, as determined by measurement and observation, reveal the presence of Negrito blood.

The physical measurements here given were taken by me at various times between 1901 and 1909. They were taken according to the methods of Topinard (*Éléments d'Anthropologie Générale*) and are discussed in accordance with his system of nomenclature.

The first Negritos measured are members of a little community on the south slope of Mount Mariveles in the province of Bataan. They are of a markedly pure type. While it is usual to find Negrito communities considerably affected by Malayan blood, in this case I doubt if there is more than a single individual who is not of pure Negrito race. Nine men and ten women, all adults, practically the entire grown population of this group, were measured. Although this is a small number, the surprising uniformity of characteristics in all practically assures us that in these individuals we have the normal, pure type of Negrito, which may be used as a standard for comparison with other peoples.

The stature of these nine men and ten women arranged serially appears below:

MEN	WOMEN
1374	1266
1381	1292
1435	1305
1439	1326
1440 = mean	1341
1467	1375
1495	1385
1526	1396
1532	1400
	1460

These figures give an extreme variation of 158 mm. for the men and 194 mm. for the women. The mean stature for men is 1440, the average 1454, and for the women 1341-1375 and 1354 respectively. These, it scarcely need be said, are extremely low statures, perhaps as low as have ever been recorded on any group of people. According to Topinard's nomenclature they are all distinctly "pigmy."

In every individual the extreme reach of the arms ("*grande envergure*") exceeded the stature. In the men the excess varied from 30 mm. to 139 mm. and in the women from 23 mm. to 102 mm. This measurement shows the Negritos to have unusually long arms. In yellow races the arm-reach is about equal to the stature, and in the white race it is usually a little above. I think we may take this excessive reach of arms to be a truly Negrito character.

The cephalic and nasal indices for both men and women are next given:

<i>Cephalic Index</i>		<i>Nasal Index</i>	
MEN	WOMEN <sup>1</sup>	MEN	WOMEN
80	78	84	79
80	79	90	86
80	81	90	90
80	81	91	92
82	82	95	92
82	87	97	92
82	93	98	97
87		98	98
88		100	98
			109

<sup>1</sup> Obtained for seven women only.

Topinard's nomenclature for cephalic index is as follows:

Long heads (dolichocephalic)	74 and below
Medium heads (mesaticephalic)	75 to 79
Broad or round heads (brachycephalic)	80 to 90

Thus with two exceptions our Negritos are decidedly round headed or brachycephalic. The exceptions are two women (indices 78 and 79), who in other respects are typical. The first had the lowest stature recorded (1266 mm.) and her arm-reach exceeded her stature by 57 mm. Her nose was very broad and flat (index 98), hair kinky, color and other characters those of the pure Negrito. The second woman was without obvious indication of mixed blood, but her nasal index was only 79 or mesorhinian, and this even more than her head form would suggest the probability of some Malay blood. I think we must conclude, then, that the head form of the Negrito, while usually decidedly round, has considerable variation and approaches mesaticephaly.

Topinard's nomenclature for nasal index is, for the living:

Broad and flat noses (platyrhinian)	108 to 87.9
Medium noses (mesorhinian)	81.4 to 69.3
Thin, high noses (leptorhinian)	69.4 to 63

Those familiar with Topinard's monumental work will recall the particular importance he gives to the nasal index, and how he shows that it is perhaps the most exact character for classifying races; all white races being leptorhinian, the yellow mesorhinian, and the black or negro races platyrhinian. Indeed the presence of a markedly platyrhinian type of nose may almost be taken as clear proof of negro derivation. The nasal index of Negritos, as would be expected in a race whose outward characters are so obviously negroid, is exceptionally high or platyrhinian. Again the figures for men and women are arranged serially so as to show the mean and variation.

*Nasal Index*

MEN	WOMEN
84	79
90	86
90	90
91	92

95	92
97	92
97	97
98	98
100	98
	109

All of these nasal indices, with the sole exception of the woman mentioned above, are below mesorhinian or pronouncedly platyrhinian and negroid.

The shape of the Negrito nose is peculiar and after it has once been carefully observed can be easily recognized. The root is deeply depressed from a smooth and rounding forehead, the bridge is short and low, and the end rounding and bulbous. Sometimes, but not usually, the nostrils are horizontally visible. The apertures of the nostrils are very flat and their direction almost parallel with the plane of the face.

It has been repeatedly asserted that the body color of the Negrito is black, but this is a gross exaggeration. It is a dark brown, several shades darker than the Malay, with a yellowish or saffron "undertone" showing on the less exposed parts of the body. As compared with the lighter colored peoples about him his color is pronounced enough to warrant the appellation of negro which is applied to him, but this term must not be considered as other than a popular description.

The hair of the Negrito is typically African. It is kinky and grows in the little clusters or "peppercorn" bunches peculiar to negro races. The Negrito man and woman usually wear the hair short, cutting it more or less closely so that it resembles a thick pad over the head. Sometimes a tonsure on the back is cut away, and among still other Negritos a considerable part of the hair is removed from the head. In persons of mixed Negrito-Malayan blood the hair, if left uncut, grows into a great wavy or frizzly mop standing up well from the head.

The Negrito is seldom prognathous, nor is the lower part of his face excessively developed. His profile and features on the whole are comely and pleasing, especially in the pure type, which is less "scrawny" than in mixed individuals. The body, too, is shapely

and the proportions good, except that the head appears a little large, the legs too short, and the arms, as above noted, excessively long.

The muscular development is slender rather than stocky, seldom obese, legs a little thin and deficient in the calf.

The Negrito eye is distinctly pretty. It is dark brown and well opened. It has no suggestion of doubled lid and in all these respects differs from the eye of the Malayan.

The lips are full, the chin slightly retreating, the ear well shaped and "attached."

Such are, I believe, the normal characters of the Negrito of the Philippines. He is a scattered survivor of the pygmy negro race, at one time undoubtedly far more important and numerous; brachycephalic, platyrhinian, woolly headed, and, when unaffected by the higher culture of the surrounding peoples, a pure forest-dwelling savage.

The only other undisputed members of the Negrito race, besides those found in the Philippines, are the Andaman islanders and the Semang of the Malay peninsula. De Quatrefages' diligent and hopeful search through the literature of Malaysia for traces of the Negrito led him to the belief in their existence in a good many other places from Sumatra to Formosa, but Meyer in a subsequent essay assailed De Quatrefages' evidence except for the three areas mentioned above. If by Negrito we mean compact, independent communities of relatively pure type, I think we must agree with Meyer, but if on the other hand we mean by the presence of the Negrito the occurrence of his typical characters in numerous individuals of reputed Malayan race, then we must, I think, admit the presence of the Negrito in a great proportion of the peoples and localities of Malaysia. And in this sense there is much evidence that the Negrito still exists from the Andamans to Formosa and even to Japan, absorbed in the stronger populations that have overrun these regions.

Meyer's *Distribution of the Negritos in the Philippines and Elsewhere* is a very valuable sifting of the evidence, but it is not final, as was quickly apparent eight years ago when we came to locate Negritos on the ground. There are none for instance in Cebu,

where Meyer was led to place them, and it is certain that they live in Guimaras and on Palawan. Those of the last island are a very curious people, locally called "Batak." They were first described in a brief note with photographs by Lieutenant E. Y. Miller published by the Philippine Ethnological Survey in volume II of its Publications. Doubt has been cast on the Negrito character of these people, some supposing them to be predominantly Malayan, but there is no doubt about their being Negrito, although in places they have perhaps received Malayan blood.

In June, 1909, I measured a few Batak who had a small settlement called Laksun near the village of Bintuan, thirty miles up the coast from Puerto Princesa. The individuals of this group were typical Negritos, in color, character of hair, and general appearance. Four men who were measured were 1433, 1475, 1497, and 1590 respectively in stature. Their arm-reach in every case exceeded the height, in one the excess being 152 mm. The head indices were 80 to 81, the nasal indices 85, 98, 102, and 102. These are all true Negrito characters and, while there may be in some communities of Batak a considerable amount of Malayan blood, the predominant type is Negrito.

It appears also that the other pagan element in Palawan, known as "Tagbanwa," while predominantly Malayan and exhibiting the general appearance and manner of life of the Malayan, is in part Negrito, as is revealed by the following measurements of five "Tagbanwa" men taken at Eraan, thirty miles south of Puerto Princesa. These men include the chief, "Masekampo Kosa" and four of his retainers. Their stature varied from 1521 to 1595, less than the usual stature of a group of Malayan men. The arm-reach was notably greater than the height. All were brachycephalic, the indices being 79, 81, 81, 82, and 83. All were platyrhinian, except one who was mesorhinian, the indices being 79, 88, 95, 100, and 105. In spite of these pronouncedly Negrito results, these men had the appearance of Malays, not Negritos. Their skin color was light brown, hair wavy not curly; their habits, bearing, and speech indicated the temperament of the Malay.

The "Mamanua" of Surigao peninsula, Mindanao, have long been recognized as of Negrito race. They were seen and described

by Montano in 1880. At the present time they are very few in number, and are found in the forest about Lake Mainit and in the hill country southward. They are fast being absorbed by the Manobo, who join their communities and intermarry with them. In a little village called Kicharao in the forest near Lake Mainit are Mamanua men married to Manobo women and Manobo men married to Mamanua women, the children of these unions sometimes presenting Negroid and sometimes Malayan characters. The opportunity to observe the immediate results of mixture between two different races is very unusual. Naturally this group is of mixed race, some individuals looking like pure Negritos and from this type varying all the way to primitive Malayan. Three men whom I measured had a stature exceeding the Negrito but in other respects were Negritic. The statures were 1583, 1594, and 1612; the cephalic indices, 80, 85, and 86; the nasal indices, 97, 102, and 111.

What has not been generally noted, however, is the fact that nearly all the peoples of eastern Mindanao, usually described as "Malayan" or "Indonesian," are to a large degree Negrito. This is especially true of the Manobo of the lower waters of the river Agusan. I have no measurements of these people, but the appearance of nearly every individual in their communities is Negritic rather than Malayan. The stature is very low and frail, hair black and wavy to frizzly, features negroid, and behavior that of the pacified Negrito. Similar characters, though in a less marked degree, display themselves among the tribes southward and about the gulf of Davao. There is no doubt that there is a large amount of absorbed Negrito stock in the pagan peoples of all this great island. Even among the Subanon of the Samboanga peninsula, who are perhaps as purely Malayan as any, I have seen occasional individuals with marked Negrito characters.

I shall not attempt here to estimate the proportion of Negrito blood in the Christian peoples of the Philippines—Bisaya, Bikol, Tagalog, Ilokano, etc.—further than to express my conviction that in certain regions it is very large and has greatly modified the primitive Malayan type. But let us turn to the consideration of possible Negrito blood in two interesting pagan stocks of northern Luzon, the "Igorot" and the "Ilongot" or "Ibailao."



The term Igorot is used to include all the wild, head-hunting, mountain-dwelling peoples of the great cordillera of Luzon, a region some two hundred miles in length by forty across. This mountain area is divisible into regions wherein the culture, physical type, and language of the inhabitants are homogeneous or nearly so. These regions, in reports made some years ago on the wild tribes of the Philippines, I have called "culture areas," and they may serve, in the absence of the tribal relation, as the basis of classification. Beginning with the southern end of this mountain system we have the area of southern Benguet and Kayapa inhabited by Igorot speaking a dialect called "Nabaloi." In northern Benguet, Amburayan, and southern Lepanto are the "Kankanay." In the central mountain region, a great area with several subdivisions, the "Bontok"; and southeast, occupying the former *Comandancia* of Kiangnan, the "Ifugao." North of Bontok are the "Tinglayan," the "Tinggian" or "Itnig," the "Kalinga," and "Apayao" areas, and perhaps others. Of these most northerly peoples I have no anthropometric data. Their general appearance is somewhat different from that of the Igorot farther south. They appear to the eye to be more slender and handsomely built, with finer features, especially in the case of the Tinggian. I am of opinion, however, that these dissimilarities are apparent rather than real, and that measurements and careful observation will demonstrate unity of physical type throughout the entire cordillera. This unity does not refer of course to manner of dressing the hair, ornamentation, artificial deformations, etc., in which there is wide variation. The ethnological origin of these Igorot peoples is at first very puzzling. They are obviously not typical Malaysians. Some physical measurements which I have should, and I believe do, throw some light on the problem.

On September 26, 1902, at Ambuklao, Benguet, I measured ten Igorot men from the villages of Baguio, Trinidad, Tublay, and Ambuklao. All were adults, from 20 to 40 years of age, except one, a boy of 16, who was, however, married and not inferior in stature to the others. These men all belonged to the poor or "kailian" class, except one who had arisen to the "principal" class from poor parentage. By "poor" class in Benguet is meant those who have

no cattle, rice terraces, mines, or other productive property and are liable to the forced labor of "polistas." The stature, arm-reach, and cephalic and nasal indices of these Igorot are arranged below:

HEIGHT	ARM-REACH	CEPHALIC INDEX	NASAL INDEX
1481	1489	83.0	82.9
1490	1550	75.7	85.8
1496	1532	78.9	104.8
1499	1556	79.7	83.3
1500	1567	76.8	83.5
1512	1588	87.5	75.0
1522	1583	76.0	89.4
1546	1602	81.2	97.7
1596	1564	82.3	79.1
1615	1647	96.3	105.0

Of these statures all but one are "short," or below 1600. In fact these men are only a little above the average stature of the Negritos of Mariveles (1450). Five are within 50 mm. of a true pygmy stature. The mean stature is 1500 to 1512, and the average is identical, 1505.7. In all but one case the arm reach exceeds the height, the excess varying from 8 to 36 mm. Six are brachycephalic, and four mesaticephalic, the variation extending from 75.7 to 96.3. The nasal index shows wide variation from 75 to 105, the mean being about 85. Four are platyrhinian, two exceeding 100, two are mesorhinian, and four are midway between Topinard's mesorhinian and platyrhinian types. The muscular development of these men is very strong, robust, or "stocky." The skin color is coffee brown with saffron undertone, lighter on trunk. Their hair is coarse and in nearly every case straight, in one case only being slightly wavy. The hair is usually scant on the body and about the face, but two men have relatively hairy bodies and legs. The eye in some cases appears to be oblique. The ear in every case is attached and normal. The chin is retreating and in one case the face is somewhat prognathic. The lips are thick and the under lip heavy. In several cases the supraorbital arches are prominent.

On September 29th of the same year, at Wagan, a small town in Kayapa, I measured fifteen Igorot of that town and of Losod. Eight were women and seven were men. The measurements and indices of these follow:

STATURE	ARM-REACH	CEPHALIC INDEX	NASAL INDEX
<i>Men</i>			
1413	1478	78.7	125.0
1493	1539	80.4	86.4
1512	1544	82.7	84.0
1550	1600	78.9	90.7
1589	1650	73.2	90.9
1594	1650	78.8	100.0
1653	1672	74.6	140.0
<i>Women</i>			
1351	1376	85.1	92.6
1367	1394	76.7	92.7
1423	1467	79.1	100.0
1433	1466	76.8	105.7
1435	1455	84.8	125.3
1435	1522	82.6	100.0
1442	1446	84.6	100.0
1509	1520	74.4	100.0

The mean stature (1550) and the average (1526) were a little higher than in Benguet. In every case the arm-reach exceeded the height. The shape of head in men and women shows a wide variation. Seven are brachycephalic and seven are mesaticephalic while one is dolichocephalic (73.2). The nasal index varies from 84 to 140—a truly astonishing series of noses! All are platyrhinian except two, and nine of the sixteen have indices of 100 or over. The descriptive characters were much the same as for the Benguet group. There was occasional marked supraorbital development, retreating chin, and prognathism.

Two of the men deserve special remark. One was the very small fellow—a true pigmy (1413 mm.). He was named “Mokyao” and was born in Wagan. He suggested the Negrito in stature, in arm-reach (65 mm. in excess of stature), in nasal index (125), and in the slightly wavy quality of his hair. His head, however, was mesaticephalic (78.7).

The other was the Igorot of unusually tall stature, 1653 mm., and he was the most extraordinary savage I have ever seen. He was about 30 years old, named “Ñgaao,” a native of Wagan. When he first appeared in our camp he almost startled us with the bru-

tality of his appearance. He was promptly dubbed the "Gorilla." His arm-reach was 1672, his head length 197, breadth 147, and index 74.6; his nose length 35, breadth 48, and index 140; his height and breadth of face were 179 and 139; width of shoulders 396; circumference of chest 880; of belly 810. His ears were greatly developed, his supraorbital arches most pronounced, and his whole appearance like a restoration of primitive man. He wore only a loin string and a deerskin knapsack, and was most extraordinarily blackened with dirt and the pitch from smoky fires. His intelligence seemed very low, but he was said to be married and to have two children.

In May, 1908, I measured two Igorot men at Akop's place near Tublay, Benguet, four men of Karao at Bokod and six men of Kabayan. These, like the preceding, were all Nabaloi, although the people of Karao speak a somewhat different dialect and are allied to the "Busul"—wild, robbing Igorot of the high mountains between the Agno river valley and Nueva Vizcaya. The statures and cephalic and nasal indices of these twelve men are given below:

STATURE	CEPHALIC INDEX <sup>1</sup>	NASAL INDEX <sup>1</sup>
1467	74.1	79.4
1508	74.2	85.1
1511.5	74.3	86.3
1529	75.2	87.6
1541	75.6	88.3
1550	76.0	92.0
1565	76.0	92.1
1572	76.2	93.7
1591	76.4	100.0
1602	78.1	100.0
1648	78.4	100.0
1681	79.7	100.0

The stature of these men is "short," about the same mean as that of other Igorot given above. Two, however, belong to Topinard's "above medium" statures, being 1648 and 1681. These are unusually tall Igorot and it may be worth noting that both belong to the wealthy or "baknang" class. The taller is "Belasco" of

<sup>1</sup>The numbers are arranged serially.

Kabayan and the other "Akop" of Tublay. All are mesaticephalic and their indices cover the entire range of this class, 74 to 80. The most brachycephalic is "Belasco" and the next "Akop," the two of unusual stature. These men are less brachycephalic than the Igorot measured at Ambuklao and Kayapa, but the numbers in each case are too few to permit generalization. The group is platyrhinian for the greater part, four only being mesorhinian. On the whole this is a very homogeneous group of men. With two exceptions all are of about the same low stature, all mesaticephalic, all platyrhinian or nearly so. The hair of all is black, coarse, and straight, the body smooth and face as well, except that the men of Karao had a few mustache and chin hairs and seemed to be more hairy on the legs than the others. The profile of the nose was much alike in all, a straight short bridge, rounding bluntly at the end. The brows were rather prominent, especially in the Karao men.

In the same month I measured two men of Bugias, Benguet, and four of Suyok, Lepanto, all of whom were "Kankanay." These measurements were as follows:

STATURE	ARM-REACH	CEPHALIC INDEX	NASAL INDEX
1452	1490	75.3	100.0
1470	1545	78.8	88.6
1518	1577	79.2	95.0
1621	1676	78.8	97.8
1558	1554	72.8	92.6
1571	1591	81.0	83.0

These men are all of low stature, long armed, all platyrhinian, but having a very varying head-shape, one being dolichocephalic (head length 195, breadth 142, and index 72.8), and one brachycephalic, 81.

On the same trip, at Benawi, I measured ten Ifugao men. All were adult, well formed, and of the laboring or "polista" class. Their measures are as follows:

HEIGHT	CEPHALIC INDEX <sup>1</sup>	NASAL INDEX <sup>1</sup>
1465	71.00	85
1501	71.65	93
1530	74.00	95

<sup>1</sup>The numbers are arranged serially.

HEIGHT	CEPHALIC INDEX	NASAL INDEX
1534	76.50	97
1556	76.90	100
1567	77.26	100
1579	77.80	106
1581	79.60	106
1600	80.40	118
1606	83.50	119

The mean height and the amount of variation are almost exactly the same as those found in Benguet. All but two are of "short" stature, while one approaches that of a Negrito. The head index is generally mesaticephalic, but three are dolichocephalic and two brachycephalic, the amount of variation being surprising. All are platyrhinian, most of them excessively so. Their color was a dirty brown, with saffron undertone. The hair was black, abundant, and in every case wavy. The nose was flat, "bulbous," with a very rounding end, and deeply indented at root. The lips were full and prominent, the chin retreating, and eye-arches rather heavy. As these men sat together with their dark faces and abundant heads of wavy hair they had a suggestively Papuan appearance. Another peculiarity was their singularly depressed temples, which gave the face a very narrow diameter across the brow.

In the foregoing series we have altogether 53 Igorot, 8 of them women, whose physical characters may now be summarized. While this may seem a small number upon which to base conclusions, a few general statements may, with propriety, be made.<sup>1</sup>

<sup>1</sup> Other anthropometric data on the Igorot besides that here presented are as follows: In 1905, at San Francisco, Dr A. L. Kroeber measured 18 men and 7 women of Bontok and published the results in the *American Anthropologist* for Jan.-Mar., 1906, p. 194. The stature of these men varied from 1460 to 1630, the average being 1550. The average arm-reach was 1572, the average nose length 41 and breadth 40, the index varying from 85.7 to 135.5, while the average nasal index was 99.8. The average head length was 186 and breadth 148. The cephalic index varied from 73.40 (dolichocephalic) to 85.47 (brachycephalic), with an average index of 78.43 (mesaticephalic). The data for the women were: stature 1486, arm-reach 1491, nasal index 85.7 to 108.8, average 99.7, cephalic index 78.59. These measurements conform closely to my own taken upon Igorot of surrounding localities.

More recently Dr Robert B. Bean of the Bureau of Science, Manila, has published the results of a study of the Igorots of Benguet. (*The Benguet Igorots: A Somatological Study of the Live Folk of Benguet and Lepanto, Bontoc*. Manila, 1908.) Dr

Arranging serially the statures of the forty-five men, it is found that two of them are below 1450 mm., nine are between 1451 and 1500, fourteen between 1501 and 1550, thirteen between 1551 and 1600, five between 1501 and 1650, and two are above 1650 and below 1700. I believe that these figures are representative of all the Igorot stock. From a personal experience extending over a good many years I think it may be asserted that the Igorot in all parts of the cordillera present about the same statures as those which I have here given. Belasco and Akop would be recognized as very tall Igorot in any part of the mountains. Two of the above are pygmy and all but seven are below 1600, and correspond to Topinard's "below medium" statures. We may say, then, with positiveness that the Igorot is one of the exceptionally short races of mankind. With three or four exceptions the arm-reach is greater than the height, usually by 40 to 50 mm. Thus, the short stature is somewhat compensated for by long arms, heavy, robust bodies, and short, muscular legs.

The cephalic index of both men and women ranges from 70 to 96.3, a very surprising range. Ten are dolichocephalic, 71 to 74.6; twenty-nine are mesaticephalic, 75.2 to 79.7; twelve are brachycephalic, 80.4 to 84.8, and two are hyperbrachycephalic, 85 and 96.3. Thus the vast majority of heads are mesaticephalic with more tendency toward brachycephaly than to dolichocephaly.

The nose represents on the other hand surprising uniformity. Only three noses are mesorhinian, 75, 79.1, and 79.4, thirty-nine are full platyrhinian, while twenty-two have an index of 100 or more. The mean index is 95.

From this comparison I think we may assert that in the mountain people of the southern half of the cordillera of Luzon we have

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Bean measured 104 adult males, 10 adult females, and 30 boys. The average stature of the men was 1540, which is about my own average; but he seems to have found a maximum stature in Benguet of 1700, a very tall stature indeed and unprecedented in my experience with this race. He also considers the Igorot to be "essentially short armed." He found a very variable type of head (hyperdolichocephaly to hyperbrachycephaly). The nose was platyrhinian. Thus, in a general way, Dr Bean's results agree with my own, although his measurements were carried out with many more details than it appeared to me advisable to attempt. Our conclusions, also, as to the origin and affiliations of the Igorot are far apart.

a very short, long-armed, muscular race of dark brown color varying to saffron, with coarse black hair that is usually straight but in Bontok is sometimes wavy, and in Kiangnan regularly so, full lips, retreating chin, flat, broad noses rounding at the end and deeply depressed at the root, with an extraordinarily high nasal index, and heads that have great variation in shape but are usually mesocephalic or brachycephalic.

May we then draw a few conclusions? Obviously this is not a typical Malay type. To a possible basis of primitive Malayan stock some other racial element or elements have been added and thoroughly incorporated. The wide range in shape of head may be taken, I think, as probable evidence of such mingling of types. The color, the straight or slightly wavy black hair, and the temperament (the "psyche") of the Igorot show the Malay or Oceanic Mongol derivation. The short stature and limbs, the long arms, the shape and index of the nose, the occasional heads of hair that are too wavy for the Malay and would be unheard of in the Mongol—these things are Negrito, or at least they are characteristic of the black race of Oceanica. The variability in shape of head would be puzzling were it not for the fact that both the Malayan and the black races of the Indian archipelago show a wide variability in this character of the head. These reflections have already suggested the theory that I have to propose for the origin of the Igorot, that he is an old, thoroughly fused mixture of the aboriginal Negritos, who still survive in a few spots of the cordillera, and an intrusive, Malayan race, who, by preference or by press of foes behind them, scaled the high mountains and on their bleak and cold summits and canyon slopes laboriously built themselves rock-walled fields and homes, in which they have long been acclimated. The culture of the Igorot has been greatly modified and advanced by the rigors of his habitat, but it is Malayan at base, as are the languages which he speaks. Except in one or two localities where there has been recent mixture with the still existing Negrito he does not make use of the bow and arrow, which are Negrito weapons, but uses the shield and spear for close fighting and the jungle knife or an interesting modification, the "headax," for both fighting and work.



While the above expressed hypothesis of the origin of the Igorot appears to me to have much probability, for a similar theory to explain the Malay type of the Ilongot or Ibilao I feel even stronger confidence. This curious people occupies a very broken mountain area formed by the junction of the Sierra Madre with the Caraballo Sur. This is the headwaters of the Kagayan river and to a less degree of the Pampanga. Besides being wholly mountainous it is covered with thick and well nigh impenetrable jungle, in which the scattered homes of these wild people are hidden and protected. They have long had the worst of reputations as head hunters and marauders, and little information about them has circulated except wild rumors of their strange appearance and treacherous ferocity.

They have been described as "very tall," "heavily bearded," "light in color," "white," and of a type elsewhere unknown in the Philippines. For most of these reports there is no foundation. My experience with this people is limited to two visits to two different communities, in 1902 to a group in the jurisdiction of Nueva Vizcaya and in 1909 to a community in the mountains back of Pantabangan, Nueva Ecija. On the first visit measurements and notes were made of four men and three women. Their stature was found to be as follows:

MEN	WOMEN
1480	1386
1518	1440
1553	1510
1590	

The average stature of these men was 1535, a little less than the average stature of Igorot, and so a very short human height. The cephalic index for the seven, and the nasal index for six (one missing) are as follows:

CEPHALIC INDEX	NASAL INDEX
79.7	77.5
80.7	82.5
80.8	88.6
83.8	88.6
85.1	88.7
87.1	90.9
88.0	

All are brachycephalic except one (79.7), and all are platyrhinian but one.

In the second community I measured twelve men and five women, with the following results:

STATURE MEN	STATURE WOMEN	CEPHALIC INDEX	NASAL INDEX
1610	1453	89	100
1583	1450	87	98
1582	1441	86	95
1580	1422	85.9	95
1570	1412	85	94
1544		84	93
1532		83.7	90
1503		83.3	89
1486		83	89
1467		81	88
1439		81	87.8
		81	87
1240 (a boy)		80	87
		80	83
		79	82
		79	82
		76	76

The height of these men presents a wider variation, as would be expected in the larger number (1601 to 1437), but the mean and the general results are the same. The head index is brachycephalic except in the case of three, and all are platyrhinian, or nearly so, except one. Thus in these Ilongot we have a short race, even shorter than the Igorot, brachycephalic and platyrhinian. Their hair is wavy, except when it is curly. It is usually worn long. The face is occasionally hairy; a few individuals have been seen with sparse but quite long, curly beards. Their eyes are larger, finer, and more open than is usual in the Igorot and the Malay. One peculiarity of the face is noticeable: it narrows rapidly from the cheek bones to the chin, giving the face a pentagonal shape. The color may be a little lighter than in the Igorot, who is more exposed to sunlight than the Ilongot of the forest, and it is much lighter than in the Negrito, but by no means light enough to justify any likeness to either white or Mongol races.

In these people we have, I am quite sure, a mixture of primitive Malayan and Negrito, with more Negrito than in the case of the Igorot. Stature, curly hair, short head, and broad, flat nose—these are all negritic characters, as is also the hairiness of the face and body. In fact there can be no doubt of the presence of Negrito blood in the Ilongot, for the process of assimilation can be seen going on. The Negrito of a comparatively pure type is a neighbor of the Ilongot on both the south and the north. Usually they are at enmity, but this does not, and certainly has not in the past, prevented commingling. The culture of the Ilongot is intermediate, or a composite of Malayan and Negrito elements. He uses the bow and arrow of the Negrito and the spear of the Malayan as well. There are few things in the ethnography of the Ilongot that seem unusual and for which the culture of neither Malay nor Negrito does not provide an explanation. One curious peculiarity, however, is an aptitude and taste for decorative carving, applied to the door posts, lintels, and other parts of his house, to the planting sticks of the woman, to the rattan frame of his deer-hide rain-hat, etc. But except for this there seems little that is not an inheritance from the two above strains or a development due to isolation in these mountainous forests that have long been his home.

In concluding this account of the Ilongot I cannot forbear calling attention to what appears to me a striking resemblance between them and the "Sakay" of the Malay peninsula as these latter are photographed and described in Skeat and Blagden's *Pagan Races of the Malay Peninsula*. There, as in the Philippines, we have a wavy-haired people (the Sakay) located in between, and obviously mingling with, the Negrito ("Semang") on the north and the primitive ("Jakun") Malayan on the south. The type is clearly intermediate between these two races, and every Sakay community seems to contain individuals that exhibit both pronounced Negrito and Malayan characters. There seem to be no culture elements in the ethnography of the Sakay that are not found in the life of Semang, Jakun, or allied peoples. And yet, in the face of what would seem to be the obvious and natural supposition that the Sakay is a half-breed of the Semang and Jakun, our authors, following Professor Rudolf Martin

(*Die Inlandstämme der malayischen Halbinsel*), discover in the Sakay a distinct race of wholly different origin from the Semang and Jakun—but allied to the Veddahs of Ceylon! This seems to me to be creating a far-fetched theory where none is necessary. While I have not had an opportunity of studying the Sakay at first hand, I am tolerably familiar with Negrito and primitive Malayan, and the results of their intermarriage, and every fresh examination of the texts and illustrations above referred to increases my belief that the Sakay, like so many of the types of the Philippines, is an exhibit to the widely diffused Negrito element in Malayan peoples.

UNIVERSITY OF CALIFORNIA,  
BERKELEY.